

BEFORE THE OFFICE OF THE COMMISSIONER OF RAILROADS

STATE OF WISCONSIN

In the Matter of the:

Petition of the Village of Fredonia for the Establishment of a Public Crossing of the Wisconsin Central Ltd. Tracks with Martin Road in the Village of Fredonia, Ozaukee County

9164-RX-482

FINAL DECISION

By letter dated May 24, 2002, the Village of Fredonia petitioned the Office of the Commissioner of Railroads (OCR) for the establishment of a public crossing of Martin Road with the Wisconsin Central Ltd. (WCL) tracks located in the Village of Fredonia, Ozaukee County.

Jurisdiction: Secs. 195.28 and 195.29, Stats.

Pursuant to due notice, public hearing was held in this matter on July 9, 2002 in Fredonia, Wisconsin with hearing examiner Douglas S. Wood presiding.

On August 2, 2002, the hearing examiner issued a proposed decision that recommended denying the petition for the new crossing. While the hearing examiner found that a need existed for the crossing, he also concluded that the petition should be denied because the approach grades to and through the crossing exceeded design standards. The proposed decision stated:

Nonetheless, the **hearing examiner recommends** that the petition for a new at-grade crossing be denied because of the unacceptably steep grade on the west side of the track. The grade reaches nearly 8% going downhill toward the track. The grade does level out to about 1% as the roadway approaches the crossing, but is never completely level. The AASHTO (American Association of State Highway and Transportation Officials) design manual recommends that grades near intersections (such as at-grade crossings) not exceed 3%, but allows a maximum grade of 6% where conditions make the 3% grade too expensive or otherwise impractical (See, *A Policy on Geometric Design of Highways and Streets, 2001* at page 586.). The proposed grade here exceeds the recommended maximum by nearly 2%. The grades are even more critical for rail-highway crossings than for highway-highway intersections because trains can not turn or stop to avoid a vehicle sliding through the crossing.

By letter dated August 9, 2002, the Village, by its engineer Kapur and Associates, requested an extension of time to file comments on the proposed decision and also sought guidance regarding acceptable grades. By letter dated August 13, the hearing examiner suggested that any revised plans should meet the AASHTO standards and the Wisconsin Department of Transportation's Facilities Development Manual standards for grade changes in the immediate vicinity of the crossing.

By letter dated September 17, 2002, the Village submitted revised plans that address the concerns raised by the hearing examiner. The new plans provide a maximum 6% grade within 300' of the crossing. The new design also provides a 3" maximum deviation from the plane of the rails within 30' from the rails.

Since the Village has addressed the OCR's concerns, the Commissioner approves the petition for the establishment of Martin Road crossing. The order does require that the Village pay for crossing signals and acquire permanent sight easements to create and maintain a clear view within the required sight triangles in each quadrant.

Appearances:

Parties

Village of Fredonia, Petitioner
by
Allen Neumann
Director of Public Works
PO Box 159
Fredonia, WI 53021

In Opposition (by letter):

Wisconsin Central Ltd.
by
Terry Lee, PE
Engineer Planning
1625 Depot Street
Stevens Point, Wisconsin 54481

Findings of Fact

THE COMMISSIONER FINDS:

The Village plans to extend Martin Road from Filmore Street on the west to Milwaukee Street on the east, a distance of about 1300'. This extension would cross the WCL track. Construction is proposed for 2003 and 2004. The project would provide a second crossing within the Village limits. For the reasons stated below, **the Commissioner approves the establishment of the crossing.**

As proposed, Martin Road would be 36' wide (face-to-face of curb) and intersect the track at an angle of 90°. The roadway approaches to the crossing would transition from -0.80% to -6.00% on the west and from -0.80% to +3.88% on the east.

The Village projects Martin Road would carry 1000 to 1500 ADT (average daily traffic) in the design year of 2024. The speed limit would be 25 mph.

The railroad currently operates 2 through train movements per day over the proposed crossing location at a speed of 10 mph.

A driver traveling at 25 mph needs a distance of 165' to stop safely. The crossing will be visible from more than 165' in each direction. Assuming a train speed of 10 mph, a driver traveling at 25 mph needs to see a train when it is 90' from the crossing from a point 165' down the highway. The Village could provide adequate sight distance in each quadrant.

The exposure factor at this crossing will be 3000. The exposure factor equals the product of the number of trains per day and the number of highway vehicles per day, which yields a numerical value for the potential conflicts each day at the crossing. The Department of Transportation's Facilities Development Manual recommends consideration of automatic flashing lights when the exposure factor at a crossing exceeds 5,000-7,000 in an urban area.

The Village demonstrated a need for a second crossing of the WCL tracks. At present there is only one crossing within the Village limits (at Fredonia Avenue). The nearest alternate crossings are at Willow Valley Road about one mile north and at CTH 'O' about six miles to the south. The Village has one fire station, which is located east of the track. If the Fredonia Avenue is blocked, emergency response would be significantly impaired.

The extension of Martin Road would also improve the transportation network in the Village by providing a second east-west collector route. The establishment of the Martin Road crossing will promote public safety and convenience.

In order to adequately protect public safety, 12" LED automatic flashing lights are needed because of the steep approach grade on the west. In addition, the OCR generally orders signals at new crossings to ensure that new crossings are safe. There are already approximately 2200 crossings in the states without signals. The OCR strives to reduce that number and it would be counterproductive to allow new crossings to be established without automatic flashing lights.

The railroad may use either motion sensors, Type C circuitry or island circuits.

Light emitting diodes (LED) are a relatively new application for crossing signals. The LED lamps replace the incandescent bulbs. LEDs have higher conspicuity, a wider cone of vision, and longer life than incandescent lights. LEDs are especially useful on east-west roadways where the rising and setting sun may make the signals difficult to see.

The order provides for the WCL to use new signal materials. It is possible that salvaged signal materials will become available for use at this crossing, but that determination will have to be made at a later date.

Timing and Costs. The project is planned for 2004. The Village will pay all costs for the crossing construction, signals, and easements.

Ultimate Conclusions on the Issues

THE COMMISSIONER CONCLUDES:

1. That the establishment of the crossing at-grade of Martin Road with the Wisconsin Central Ltd. tracks in accordance with the design plans of the Village of Fredonia in the Village of Fredonia, Ozaukee County would promote public safety and convenience.
2. That establishment of the crossing is advisable under all the circumstances.
3. That in order to adequately protect and promote public safety, it is necessary to install and maintain 12" LED automatic flashing lights.
4. That it is reasonable that the Wisconsin Central Ltd. bear no part of the cost for the crossing construction.

Conclusion of Law

THE COMMISSIONER CONCLUDES:

That the jurisdiction of the Office of the Commissioner of Railroads under §§195.28 and 195.29, Stats., extends to this matter. Accordingly, the Office enters an order consistent with the findings of fact.

Order

THE COMMISSIONER ORDERS:

1. That the **Wisconsin Central Ltd.** shall install and maintain a crossing at-grade of Martin Road with its tracks in accordance with the design plans of the Village of Fredonia in the Village of Fredonia, Ozaukee County by **August 1, 2004.**
2. That the **Wisconsin Central Ltd.** shall install and maintain automatic 12" LED flashing lights signals with appropriate appurtenances in accordance with such plans as are filed with and approved by the Office of the Commissioner of Railroads at the crossing of its tracks with Martin Road at-grade in the Village of Fredonia, Ozaukee County by **August 1, 2004.**

3. That the **Wisconsin Central Ltd.** shall submit to the Office of the Commissioner of Railroads signal and circuit plans with the cost estimate of its proposed installation. The **Wisconsin Central Ltd.** shall submit a cost estimate to the **Village of Fredonia** and upon completion of the signal project, a detailed statement of the actual cost to the Office and to the **Village of Fredonia**.

4. That the signal installation work herein ordered shall not begin until the **Village of Fredonia** informs the railroad that they may start such work and such start notice will not be issued until appropriate federal aid or other funding arrangements have been assured. The cost of the new project initiated before the start notice will not be reimbursed with public funds and shall be the responsibility of the railroad.

5. That the **Village of Fredonia** shall obtain permanent easements to provide a clear view within the required sight triangles (except that part within the railroad right-of-way). That the Village shall remove any obstructions within those sight triangles (except that part within the railroad right-of-way), including earth embankments, as part of the project. The triangles are formed by connecting the following points: a) the intersection of the centerline of the roadway and the near rail of the tracks; b) a point 90' down the tracks and; c) a point 165' along the roadway from the near rail of the tracks.

6. That the **Village of Fredonia** shall install and maintain advance warning signs (sign W10-1) at a distance in accordance with the Manual on Uniform Traffic Control Devices (MUTCD) from the crossing on each approach by **August 1, 2004**.

7. That the **Village of Fredonia** shall pay all costs for the construction of the crossing, signals, and easements. The **Wisconsin Central Ltd.** shall bear no part of the cost of the crossing construction, except for any cost assessed to the railroad pursuant to §195.60, Stats., for the investigation of this matter by the Office. The railroad shall not pass on those assessment costs either directly or indirectly.

8. That jurisdiction is retained.

Dated at Madison, Wisconsin, _____.

By the Office of the Commissioner of Railroads.

Rodney W. Kreunen
Commissioner of Railroads

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